

CLAIMS

Therefore, having thus described the invention, at least the following is claimed:

1. A system for managing the allocation and storage of media content instance files in a hard disk of a storage device coupled to a media client device in a subscriber television system, comprising:
 - a memory for storing logic;
 - a buffer space in the hard disk for buffering media content instances as buffered media content instance files; and
 - a processor configured with the logic to track the size of permanent media content instance files and the buffered media content instance files to provide an indication of available free space, such that the indication is independent of the buffer space.
2. The system of claim 1, wherein the processor is further configured with the logic to provide a user interface, responsive to a user input, wherein the user interface provides the indication of available free space for permanently recording media content instances, wherein the permanently recorded media content instances are configured as the permanently recorded media content instance files.
3. The system of claim 2, wherein the permanently recorded media content instance files can be deleted from the storage device.
4. The system of claim 2, wherein the user input is implemented with a remote control device.

1 5. The system of claim 2, wherein the permanently recorded media content is from
2 the buffer space.

1 6. The system of claim 2, wherein the permanently recorded media content is a
2 scheduled recording initially written to non-buffer space.

1 7. The system of claim 1, wherein the buffer space, the available free space, and
2 permanently recorded space are located on the hard disk.

1 8. The system of claim 1, wherein the buffer space and permanently recorded space
2 are allocated from the free space on the hard disk.

1 9. The system of claim 1, wherein the buffer space and permanently recorded space
2 have physical locations on the hard disk.

1 10. The system of claim 1, wherein the buffer space and the available free space is
2 measured in units of time.

1 11. The system of claim 1, wherein the buffer space and the available free space is
2 measured in units of hard disk space.

1 12. The system of claim 1, wherein the processor is further configured with the logic
2 to buffer analog broadcast media content instances, received at a communications
3 interface, as digitally compressed media content instances.

1 13. The system of claim 1, wherein the processor is further configured with the logic
2 to buffer an analog signal received at a connector from a consumer electronics device, as
3 a digitally compressed media content instance.

1 14. The system of claim 1, wherein the processor is further configured with the logic
2 to buffer digital broadcast media content instances, received at a communications
3 interface, as digitally compressed media content instances.

1 15. The system of claim 1, wherein the processor is further configured with the logic
2 to buffer digital media-on-demand media content instances, received at a communications
3 interface from a remote server, as digitally compressed media content instances.

1 16. The system of claim 1, wherein the processor is further configured with the logic
2 to buffer digital media content instances, received at a digital communications port from a
3 local network, as digitally compressed media content instances.

1 17. The system of claim 1, wherein the processor is further configured with the logic
2 to buffer digital media content instances, received at a digital communications port from a
3 local device, as digitally compressed media content instances.

1 18. The system of claim 1, wherein the processor is further configured with the logic
2 to determine the available free space after subtracting buffer space capacity from total
3 disk space.

1 19. The system of claim 1, wherein the processor is configured with the logic to
2 reduce the available free space by the amount of the space used for the permanent media
3 content instance files.

1 20. The system of claim 1, wherein the processor is configured with the logic to
2 increase the available free space by the amount of the space recovered from a deleted
3 permanent media content instance files.

1 21. The system of claim 1, wherein the indication of the free space available is
2 configured in time of space available for the permanent media content instance files.

1 22. The system of claim 1, wherein the free space indication is unaffected by writes to
2 and deletions from the buffer space.

1 23. A system for managing the allocation and storage of media content instance files
2 in a hard disk of a storage device coupled to a media client device in a subscriber
3 television system, comprising:

- 4 a memory for storing logic;
- 5 a buffer space in the hard disk for continuously buffering media content instances as
- 6 buffered media content instance files; and
- 7 a processor configured with the logic to track the size of permanent media content
- 8 instance files and the buffered media content instance files, wherein the
- 9 processor is further configured with the logic to provide a user interface,
- 10 responsive to a user input, wherein the user interface provides the
- 11 indication of available free space for permanently recording media content
- 12 instances, wherein the permanently recorded media content instances are

13 configured as the permanently recorded media content instance files,
14 wherein the permanently recorded media content instance files can be
15 deleted from the storage device, wherein the user input is implemented
16 with a remote control device, wherein the permanently recorded media
17 content is from the buffer space, wherein the permanently recorded media
18 content is a scheduled recording initially written to non-buffer space,
19 wherein the permanently recorded media content is a scheduled recording
20 initially written to non-buffer space, wherein the buffer space, the
21 available free space, and permanently recorded space are located on the
22 hard disk, wherein the buffer space and permanently recorded space are
23 allocated from the free space on the hard disk, wherein the buffer space
24 and permanently recorded space have physical locations on the hard disk,
25 wherein the buffer space and the available free space is measured in units
26 of hard disk space, wherein the processor is further configured with the
27 logic to buffer analog broadcast media content instances, received at a
28 communications interface, as digitally compressed media content
29 instances, wherein the processor is further configured with the logic to
30 buffer an analog signal received at a connector from a consumer
31 electronics device, as a digitally compressed media content instance,
32 wherein the processor is further configured with the logic to buffer digital
33 broadcast media content instances, received at a communications interface,
34 as digitally compressed media content instances, wherein the processor is
35 further configured with the logic to buffer digital media-on-demand media
36 content instances, received at a communications interface from a remote
37 server, as digitally compressed media content instances, wherein the

processor is further configured with the logic to buffer digital media content instances, received at a digital communications port from a local network, as digitally compressed media content instances, wherein the processor is further configured with the logic to buffer digital media content instances, received at a digital communications port from a local device, as digitally compressed media content instances, wherein the processor is further configured with the logic to determine the available free space after subtracting buffer space capacity from total disk space, wherein the processor is configured with the logic to reduce the available free space by the amount of the space used for the permanent media content instance files, wherein the processor is configured with the logic to increase the available free space by the amount of the space recovered from a deleted permanent media content instance files, wherein the indication of the free space available is configured in time of space available for the permanent media content instance files, wherein the processor is further configured with the logic to provide the user interface that provides an indication of available free space, such that the indication is unaffected by writes to and deletions from the buffer space.

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24. A method for managing the allocation and storage of media content instance files in a hard disk of a storage device coupled to a media client device in a subscriber television system, comprising the steps of:
buffering media content instances into buffer space as buffered media content instance files;
tracking the size of permanent media content instance files and buffered media content instance files; and

8 providing an indication of available free space, such that the indication is
9 independent of the buffer space.

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1 25. The method of claim 24, further comprising the step of providing a user interface,
2 responsive to a user input, wherein the user interface provides the indication of available
3 free space for permanently recording media content instances, wherein the permanently
4 recorded media content instances are configured as the permanently recorded media
5 content instance files.

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1 31. The method of claim 24, wherein the buffer space and permanently recorded
2 space are allocated from the free space on the hard disk.

1 32. The method of claim 24, wherein the buffer space and permanently recorded
2 space have physical locations on the hard disk.

1 33. The method of claim 24, wherein the buffer space and the available free space is
2 measured in units of time.

1 34. The method of claim 24, wherein the buffer space and the available free space is
2 measured in units of hard disk space.

1 35. The method of claim 24, further comprising the step of buffering analog broadcast
2 media content instances, received at a communications interface, as digitally compressed
3 media content instances.

1 36. The method of claim 24, further comprising the step of buffering an analog signal
2 received at a connector from a consumer electronics device, as a digitally compressed
3 media content instance.

1 37. The method of claim 24, further comprising the step of buffering digital broadcast
2 media content instances, received at a communications interface, as digitally compressed
3 media content instances.

1 38. The method of claim 24, further comprising the step of buffering digital media-
2 on-demand media content instances, received at a communications interface from a
3 remote server, as digitally compressed media content instances.

1 39. The method of claim 24, further comprising the step of buffering digital media
2 content instances, received at a digital communications port from a local network, as
3 digitally compressed media content instances.

1 40. The method of claim 24, further comprising the step of buffering digital media
2 content instances, received at a digital communications port from a local device, as
3 digitally compressed media content instances.

1 41. The method of claim 24, further comprising the step of buffering determining the
2 available free space after subtracting buffer space capacity from total disk space.
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1 42. The method of claim 24, further comprising the step of buffering reducing the
2 available free space by the amount of the space used for the permanent media content
3 instance files.

1 43. The method of claim 24, further comprising the step of increasing the available
2 free space by the amount of the space recovered from deleted permanent media content
3 instance files.
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1 44. The method of claim 24, further comprising the step of configuring the indication
2 of the free space available in time of space available for the permanent media content
3 instance files.

1 45. The method of claim 24, wherein the indication of the free space available is
2 unaffected by writes to and deletions from the buffer space.

1 46. A method for managing the allocation and storage of media content instance files
2 in a hard disk of a storage device coupled to a media client device in a subscriber
3 television system, comprising the steps of:

4 continuously buffering media content instances as buffered media content instance
5 files;

6 tracking the size of permanent media content instance files and the buffered media
7 content instance files;

8 providing a user interface, responsive to a user input, wherein the user interface
9 provides the indication of available free space for permanently recording
10 media content instances, wherein the permanently recorded media content
11 instances are configured as the permanently recorded media content
12 instance files, wherein the permanently recorded media content instance
13 files can be deleted from the storage device, wherein the user input is
14 implemented with a remote control device, wherein the permanently
15 recorded media content is from the buffer space, wherein the permanently
16 recorded media content is a scheduled recording initially written to non-
17 buffer space, wherein the permanently recorded media content is a
18 scheduled recording initially written to non-buffer space, wherein the
19 indication is unaffected by writes to and deletions from the buffer space,

20 wherein the buffer space, the available free space, and permanently
21 recorded space are located on the hard disk, wherein the buffer space and
22 permanently recorded space are allocated from the free space on the hard
23 disk, wherein the buffer space and permanently recorded space have
24 physical locations on the hard disk, wherein the buffer space and the
25 available free space is measured in units of hard disk space;
26 buffering analog broadcast media content instances, received at a communications
27 interface, as digitally compressed media content instances;
28 buffering an analog signal received at a connector from a consumer electronics
29 device, as a digitally compressed media content instance;
30 buffering digital broadcast media content instances, received at a communications
31 interface, as digitally compressed media content instances;
32 buffering digital media-on-demand media content instances, received at a
33 communications interface from a remote server, as digitally compressed
34 media content instances;
35 buffering digital media content instances, received at a digital communications
36 port from a local network, as digitally compressed media content
37 instances;
38 buffering digital media content instances, received at a digital communications
39 port from a local device, as digitally compressed media content instances;
40 determining the available free space after subtracting buffer space capacity from
41 total disk space;
42 reducing the available free space by the amount of the space used for the
43 permanent media content instance files; and

44 increasing the available free space by the amount of the space recovered from a
45 deleted permanent media content instance files, wherein the indication of
46 the free space available is configured in time of space available for the
47 permanent media content instance files.

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